

Urban Growth and Urbanisation :

A Study with Special Reference to Uttar Pradesh

by

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URBAN GROWTH AND URBANISATION:
A Study with Special Reference to Uttar Pradesh

R. C. Sinha*

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I. Introduction

During the last Census decade 1971-81, India's urban population increased from 109 million to 160 million showing an all time high growth rate of 46.39 per cent, against rural and the overall growth rates of 19.68 per cent and 25.00 per cent respectively. Comparing these growth rates with those for the earlier decade 1961-71 (urban 38.23 per cent, rural 21.86 per cent and overall 24.79 per cent), we find that the rural population growth rate declined slightly by 2.18 percentage points and the overall growth rate increased marginally by 0.21 percentage point. This indicates a substantial shift in the population from rural to urban areas. It is thereby felt that the forces of urbanisation have gained strength.¹ Compared with India, this phenomenon is more marked in Uttar Pradesh. Urban population in the State grew at a much higher rate of 60.62 per cent during 1971-81, with the rural and overall growth rates 19.76 per cent and 25.49 per cent, being of the same order as in India. Systematic enquiries are however needed to understand the nature, causes and economic implications of urban growth from the points of view of research

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and formulation of development policies. Such enquiries become all the more imperative in view of the spurt in growth of urban population during 1971-81. The present paper is an attempt in this direction. It tries to look into three broad questions within the framework of the relationship between urban growth and economic development.

1. which regions and towns have exhibited relatively higher growth rates of urban population? Based on the assumption that the pattern of urban growth varies from one region to another, an attempt has been made to identify broad economic characteristics of the regions and towns which exhibited higher rates of growth of urban population, especially during 1971-81.
2. What could be the basis of urban population growth in different regions and towns? It may be proposed that the forces of urban growth are mainly economic and originate within as well as outside the urban boundaries, referred to in the present context as 'internal' and 'external' factors respectively. The internal forces get reflected in the availability and growth of employment opportunities in urban settlements, attracting urban immigration. The external forces lead to positive linkages between rural and urban economies, depending on the levels of development and incomes of the people in rural areas on the one hand, and to forced migration from rural areas on the other.

3. How can urban development be integrated with the overall strategy of economic development? It may be mentioned here that from the Sixth Plan, the Government has been more concerned about urban development within the purview of management of the cities and towns. The intent of the above question is therefore to examine that, to the extent the external factors have influenced the urban growth, how can the pace and pattern of urban growth be articulated for a more efficient process of economic development.

The Framework of Analysis

The above mentioned questions have been examined within the theoretical premises which take into consideration both positive and negative aspects of urban growth relative to rural areas. On the positive side, it is 'urbanisation' which proceeds on the basis of establishment, expansion and diversification of economic activities at central places and in urban settlements.² Studies have shown that urban growth, relative to rural areas, is mainly the result of urban immigration.³ It is also found that rural-urban migration occurs due to urban pulls as well as rural push factors that are mainly economic in nature.⁴ Urbanisation thus signifies the strength of the urban pulls leading to economic growth and positive changes in the occupational pattern.⁵ In this context, special significance

has been attached to growth of modern manufacturing sector because of its employment potential. Modern manufacturing uses more efficient technologies and its product market may extend beyond regional territories.⁶ The relationship between urbanisation and growth of urban services is somewhat complex and difficult to establish in this kind of an aggregative analysis.⁷ Urbanisation is thus the consequence of the dynamism of internal economic base, which is in turn reinforced by urban growth to a limit.⁸ The expansion and diversification of urban economic activities may also be based on 'external' factors, especially the positive linkages between rural and urban areas.⁹ Such linkages are in terms of purchase of agricultural inputs, purchase and repairs of machinery and equipments and disposal of agricultural or agro-based products by the rural people in urban markets on the one hand and extension of the market for urban goods to the rural areas on the other. This process would be evident especially in the regions where agriculture is modernised and thereby disposable incomes of the rural people are higher. The negative aspects of urban growth considered here is that of pressure of population on the urban economy, where the labour-force gets stocked into the residual informal sector affecting the urban production and income structure. This kind of a situation signifies the relative strength of rural push factors, and has been referred to as 'excess growth', being different from 'overurbanisation' as defined by Todaro.¹⁰ It is normally expected that excess growth would be more evident in

small towns¹¹ where the internal economic base happens to be generally weak or in agriculturally backward regions where the rural people tend to move out to urban areas in search of employment, due to economic compulsion. Lastly it appears desirable to mention that in a labour surplus economy like India, evidences of both 'urbanisation' and 'excess growth' would be found in all cities and towns. The distinction between the two lies practically in terms of judgement regarding the dominance of one over the other.

Methodology

The study is based on data from the Census and other official sources.¹² At the empirical level, first the relationship between level (Index) of urbanisation and rate of growth of urban population has been studied across 16 major states, having population above 5 million in 1981, over the periods 1951-61, 1961-71 and 1971-81, and across 54 districts of U.P. over the period 1971-81. This is followed by the analysis of size-growth relationship across 30 selected urban settlements. The basis of urban growth across the settlements and districts of U.P. has been examined with the help of comparisons and correlation coefficients, considering the stocks of development in the year 1971 as well as the changes during 1971-81. It is assumed that the data on urban workforce available in the 1971 Census is by and large comparable with that regarding 'Main Workers' in

the 1981 Census.¹³ The stocks of development are represented by Index of urbanisation, proportion of workers engaged in the manufacturing sector, net output of the Factory sector, and the proportions of workers in the so-called predominantly urban (urbanising) sectors and predominantly rural (non-urbanising) sectors, and size of urban settlements. The changes are represented by the corresponding flow variables. In order to identify the internal and external factors associated with the process of urbanisation or 'excess growth', empirical analysis has been carried out also across meaningful categories of districts and urban settlements. Stated below are the aspects relating to organisation of data, identification of the sample towns and defining the various categories of the districts and towns.

In the year 1971 there were 54 districts in U.P., while the number was 56 in 1981 as Lalitpur and Ghaziabad districts were carved out from Jhansi and Meerut districts respectively, during 1971-81. For sake of comparability therefore the total number of observations in 1981 was reduced to 54 by merging Lalitpur with Jhansi and Ghaziabad with Meerut. The inter-town comparisons have been made ~~across~~ 30 sample towns identified by the following procedure. Firstly, the towns were selected systematically from the list of towns in descending order of population as in 1971, ensuring a minimum number from each size class : 100 thousand +, 20-99 thousand and below 20 thousand of population

in 1981. The towns at the margins of these size classes were replaced by others for clarity of comparisons, ensuring at the same time a fair dispersal of the selected towns over different economic regions of the state. While selecting the towns, the Hill region of U.P. has been ignored because of its typical characteristics.¹⁴ Coming to the district and town segments, they have been defined on the basis of Index of urbanisation (10% + and below 10%; 1971) for districts, Gross Value of Agricultural Output (per hectare of net area sown, Rs.2700 + and below 2700 and per capita rural population, Rs.600 + and below 600; 1976-77) for districts as well as for the selected settlements according to their location in particular districts, and the percentage of workers in the predominantly urban sectors i.e., 'urbanising sectors' (85 + and below 85) for the settlement. Lastly, certain abbreviations and terms used in the present context are explained below :

IOU	:	Index of Urbanisation, i.e., percentage of urban population
POP	:	Population size, 1971
TW	:	Percentage of total workers to population, 1971
USW	:	Percentage of workers in urbanising sectors, 1971
NUSW	:	Percentage of workers in the non-urbanising sectors, 1971
GVAO/NAS	:	Gross Value of Agricultural Output per hectare of net area sown (Rs.), 1976-77
GVAOPCR	:	Gross Value of Agricultural Output per Capita rural population (Rs.), 1976-77
POPGR	:	Percentage growth of urban population

- TWGR : Percentage growth in total no. of workers, 1971-81
- USGR : Percentage growth in no. of workers in the urbanising sectors, 1971-81
- NUSGR : Percentage growth in no. of workers in the non-urbanising sectors, 1971-81.

'Urbanising' and 'Non-urbanising' Sectors

The urbanising sectors represent the so-called 'predominantly urban' activities - modern manufacturing and services, and the non-urbanising sectors represent the residual and so-called 'predominantly rural' activities. The concepts of urbanising and non-urbanising sectors are suited in a country like India where the dichotomy between industry and agriculture is marked and where agriculture has not directly been the basis of urbanisation. The 1981 Census however does not provide the workforce data corresponding to these activity groups at district and settlement levels. Therefore the variations in the size of urbanising sectors have been studied with the help of workforce data for the occupational category of 'other workers'. The non-urbanising sector comprises agriculture and household industries in urban areas. The 1971 Census data has also been grouped accordingly for inter-district and inter-town analyses.

Better-off and Worse-off Regions and Towns

The 'better-off', regions (or districts) are characterised by relatively high Index of urbanisation and agricultural productivity, and the better off towns are the ones that are either

large in size or located in agriculturally developed regions (districts). They are better-off by implications of their characteristics, which form the basis of positive relationship between urban growth and economic development. By that token the worse-off regions and settlements are the remaining ones that are characteristically backward.

The following section II takes note of the broad trends of urban growth, section III examines the inter-regional pattern of urban growth, section IV analyses the trends of 'urbanisation' in relation to growth of towns in U.P. and section V presents the main findings and conclusions.

II. Trends in Urban Growth

It is seen that the proportions of urban population have substantially increased during 1901-81 from 10.84 per cent to 23.31 per cent in India and from 11.09 per cent to 17.95 per cent in case of U.P. with intermittent fluctuations (Table 1). These fluctuations are attributed to various reasons, such as outbreak of plague epidemic causing mass exodus from cities and towns in 1911, influenza epidemic in 1918 because of which there was a decline in the size of population during 1911-21, a set back to urban growth during 1921-31 caused by the Great Depression of 1930's, a high rate of growth of urban population over 1931-41 due to industrial growth in wake of the Second World War and an exclusive impact of migration of refugees on

the 1941-51 trend resulting from partition of India in 1947.¹⁵ These fluctuations are more evident from the percentages of growth of total, rural and urban population over the corresponding periods (Table 2). Mention may also be made/a marked decline in the rate of growth of urban population during 1951-61, which resulted from adoption of a stricter definition of towns.¹⁶ During 1961-71 the urban population grew at the/percentage rates of 28.23 in case of India and 30.68 in U.P. Finally, there has been a spurt in urban population growth during 1971-81; a good number of 1054 towns were added by the Census Authorities in case of India and 383 towns in case of U.P. Thus, while most of the time upto 1961 the trends of urbanisation were distorted, it would be interesting to examine whether the urban growth during 1971-81, accounted for by the new towns to certain extent, conforms to the process of urbanisation. This aspect is summarily studied, taking the case of U.P., while looking at changes in the size distribution of towns.

The size distribution of towns in U.P. (Table 3) shows that the proportion of towns below 5,000 population drastically declined in 1961 due to adoption of stricter definition of towns. During 1971-81, the proportions of towns and town population in the size class below 10,000 increased phenomenally, with the/total number of 383 new towns representing 16.29 per cent of the urban population having been added in 1981. These figures appear to be considerably high as compared with addition of only

50 new towns accounting for 3.10 per cent of urban population in the year 1971. Of the new towns added in 1981, as many as 377 belonged to population classes below 10,000. The number of towns in the size class 5,000-9999 also increased substantially from 94 in 1971 to 236 in 1981 (Table 4).

Prima facie therefore the spurt in growth of urban population in the state during 1971-81 may not be treated simply as an administrative phenomenon. But at the same time it may also be noted that the growth of small towns during this period has greatly influenced the city size structure, so much so that even the average per town population has declined from a round about figure of 37 thousand in 1971 to 28 thousand in 1981.

The main observations emerging from the above analysis of data presented in Table 1-4 are as follows. First, there has been an accelerated growth in urban population in the country as well as in U.P., especially during 1960's and 1970's. Second, upto the year 1971, the urban growth rates in U.P. were relatively lower than those for India as a whole. But during 1971-81, the rate of growth of urban population in the state exceeded that for the country. And third, to the extent the recent trends indicate the process of urbanisation, there seems to be a break-through in the pace of the country's economic development, and more so in U.P.

III. Inter-Regional Pattern of Urban Growth

This section examined three broad questions : which are the regions exhibiting relatively high rates of growth of urban population? How far does the urban growth conform to the process of urbanisation? And, whether the urban growth during the last Census decade 1971-81 has been of the same kind or qualitatively different from that upto 1971?

It is interesting to note that the urban population growth rates (POPGR) have generally been higher in the regions with lower values of Index of urbanisation (IOU). This pattern is evident from comparisons of the rates of growth of urban population over 1951-61, 1961-71 and 1971-81 with the values of IOU for the base years 1951, 1961 and 1971 across 16 major states of India (Table 5) and the two way frequency distribution of districts in U.P. by classes of IOU for 1971 and POPGR 1971-81 (Table 6). The values of correlation coefficients (r) between IOU for 1951, 1961 and 1971 and POPGR in the ensuing decades 1951-61, 1961-71 and 1971-81 across the 16 states come to -0.72, -0.56 and -0.76 respectively, all of them being statistically significant. Similarly, across the 54 districts of U.P., the value of r between IOU for 1971 and POPGR (1971-81) comes to -0.46, which is statistically significant at 1% level.

Coming to the next question, as to what could be the basis for urban population growth upto 1971 and in the ensuing decade, it may be noted that IOU (1971) is strongly correlated with net output of the manufacturing sector, especially the Registered sector across the districts (Table 7). The relationships between the corresponding flow variables over 1971-81, as shown in the table are weak, perhaps due to time lag involved in the process of adjustments.¹⁷ It also leaves open the question as to whether the growth of population during 1971-81 provides the real picture of urban growth in the state of U.P. Further POPGR (1971-81) is positively associated with agricultural productivity (GVAO/NAS and GVAOPCR), particularly across the districts with IOU (1971) values above 10 (Table 8). This suggests that rural-urban linkages could provide the basis for urbanisation, but they get considerable strength only beyond a cut-off level of development in rural areas.

IV. Growth of Towns and Urbanisation in U.P.

This section is based on analysis of data for the 30 sample towns. The main questions examined here are : which towns have grown at relatively faster rates during 1971-81? And, what is the pattern of correspondence between growth of town population and urbanisation?

During the period 1971-81, the rates of growth of population were relatively higher in the towns that are small (below 0.1m)

or located in agriculturally developed regions (GVAO/NAS 2700 + and GVAOPGR 600 +) or have a stronger internal base (USW 85 +) as evident from Table 9. These relationships are also observed from the values of r between size of population 1971 (POP) and POPGR (1971-81) shown in Table 11. The basis for this kind of behaviour of urban growth rates needs to be examined by taking into view the sources of growth of population (natural growth, extension of town boundaries and pattern of urban immigration) vis-a-vis the quantitative and qualitative aspects of changes in the availability of urban employment opportunities. The analysis in the present context is however based on three simplifying assumptions. First, inter-town differences in population growth are mainly due to the differences in the net immigration. Second, bulk of the immigration in the selected towns has been from rural areas. And third, the overall quality of employment in an urban settlement is revealed by the relative magnitudes of employment in the urbanising and non-urbanising sectors. In the foregoing analysis, the nature of correspondence between population growth rate and urbanisation has been examined by considering first the stocks of development in 1971 and then the changes occurred during 1971-81.

It may be observed that while the proportion of working population in 1971 (TW) hardly differs among various categories of towns, the percentages of workforce in the urbanising and non-urbanising sectors (USW and NUSW) vary respectively from

65.14 to 90.70 and from 9.73 to 34.86, showing the relative strength of the urbanising sector in providing urban employment opportunities. Further, the proportion of USW to NUSW varies from 7.61 to 9.18 among the 'better-off' categories of towns (explained in section I) and from 1.87 to 5.27 among the remaining 'worse-off' categories of towns, against the overall average of 6.66. This ratio may be taken as a positive indicator of the quality of employment in relative terms. The analysis thus leads to three observations. First, upto the year 1971, the towns have been able to absorb the growth in their population by providing employment opportunities, irrespective either of the differences in their population growth rates or of their potential of economic growth. Consequently the absorption of population has been qualitatively different. Second, the economic basis of urban growth has been provided mainly by the urbanising sectors, and more particularly by the manufacturing sector as is generally believed. And third, the economies of small, unfavourably located and industrially backward towns, constituting the 'worse-off' category, happen to be much less productive as compared with the better-off towns due to marginal absorption of labour-force in the residual sectors.¹⁸

Coming to the changes during 1971-81, let us refer to Table 10 which depicts the growth rates of population, working population, and workers in urbanising and non-urbanising sector (POFGR,

TWGR, USGR and NUSGR) and differences among these entities across the various categories of towns, along with Table 11 which shows the corresponding values of correlation coefficients (r). Whereas a high degree of correspondence is noticed between POPGR and TWGR in general, this relation is found to be stronger in cases of the better-off town categories with hardly meaningful differences between POPGR and TWGR¹⁹ and higher values of r between these two variables. In these town categories the growth rate of workers in the non-urbanising sector (NUSGR) also compared well with or even exceeded POPGR, with values of r between these two variables being positive and significant. For the better-off towns again, there was also a high degree of correspondence between USGR and NUSGR, indicating simultaneous growth of the urbanising and non-urbanising sectors; the entities USW and NUSW are fairly close to each other with positive and significant values of r . The situation in the small unfavourably located and industrially backward (worse-off) towns however appears to be quite different. In these towns categories USGR was considerably lower than POPGR, while the NUSGR was much lower than the corresponding values of POPGR and USGR. The values of r between POPGR and NUSGR and between USGR and NUSGR are also invariably negative. The 'worse-off' categories of towns thus exhibit marginal absorption of the labour-force in the residual non-urbanising sectors, forced by the pressure of population to a large extent.

V. Conclusions

Let us recapitulate the first two questions regarding urban growth : (1) which regions and towns have relatively high growth rates of urban population ? And (2) what could be the basis of urban population growth in different regions and towns? The empirical analysis with regard to these questions provides some interesting evidences as described here onward. Attention has been paid subsequently to the next question : (3) How can urban development be integrated with the overall strategy of economic development?

It is interesting to note that urban population in less urbanised regions has grown at significantly higher rates than in regions where the proportion of urban population was relatively higher in the base year, as observed across 16 states over the periods 1951-61, 1961-71 and 1971-81 and across 54 districts of U.P. over 1971-81. Likewise a negative relationship between population size and growth rate is also found across the urban settlements.²⁰ Faster growth in urban population is also evident in cases of agriculturally or industrially developed regions and the towns that are either located in agriculturally developed regions or have strong industrial base. To that extent there is indication that urban growth is accompanied by economic development, especially in large, industrially developed and favourably located towns. But majority of towns are small and located in backward regions. The recent spurt in ^{urban} growth

therefore cannot be regarded simply as a break through in pace of economic development.

Coming to the second question, it is found that growth of urban population is more or less fully absorbed in the urban economy at least quantitatively; there were hardly any meaningful differences in the proportions of working population across the different categories of towns. In the absorption of labour-force the modern (Registered) manufacturing sector played very significant role as found on the basis of inter-district analysis. At the settlement levels, there have been evidences of positive role played by modern manufacturing and service sectors taken together, referred to as urbanising sectors, both directly by providing employment to large proportions of workers and indirectly by creating conditions of faster growth of the labour intensive residual sector. In towns which are either large (0.1 m +) or located in agriculturally developed regions or have relatively strong economic base, the rates of growth of employment in the modern manufacturing and tertiary sectors taken together were higher than in other categories of towns. Further, in the former town categories the rates of growth of employment in the residual sectors were even higher than those in the modern manufacturing and services sectors taken together. But the situation in the other categories of small disadvantageously located and industrially backward towns is found to be basically different with employment in modern manufacturing and

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service sectors growing at relatively lower rates and that in the residual sectors growing at much lower rates. It may be added here that labour absorption in the residual (informal) sector in the worse-off town might be increasing due to the growth of labour-force beyond the absorption capacity of the modern urban sector. This kind of labour absorption is essentially marginal, less productive and more burdensome, opposed to the trends of urbanisation in towns that are relatively large in size, have strong economic base and are located in agriculturally developed regions.

The findings described above lead into three main conclusions. First, as observed with the help of inter-state analysis over the periods 1951-61, 1961-71 and 1971-81, and inter-district and inter-town analysis over 1971-81, the pattern of urban population growth is re-distributive in character, making the distribution of urban population over regions and towns less skewed. Second, while studying the phenomenon of urban growth it is desirable to take into account the relative strengths of the forces 'internal' as well 'external' to urban territories. It would appear that 'urbanisation' proceeds on the basis of both 'internal' and 'external' factors, while overstocking of labour in backward urban economies occurs due to external factors at the cost of productivity and economic development. Lastly, if small towns continue to grow at relatively high

rates in spite of the economic base being weak as observed during 1971-81, it is a matter of concern. Within the framework of this study, it would imply increasing gaps in the availability of productive and gainful employment opportunities and relative stagnation of regional and sub-regional economies at a fairly wide scale. As such the spurt in growth of urban population during 1970's may not be looked upon necessarily as an evidence of a breakthrough in the pace of economic development.

Finally, referring to the question as to how can urban development be integrated with the strategy of economic development, let us also take note of the existing urban development policy. As pointed out earlier, the Government is concerned for mitigating the problems of housing and availability of urban services, containing unwanted growth and concentration of urban population by channelising investments in the vicinity of small and medium towns, making allocations for towns according to their functional requirements with emphasis on industrial development, and improving quality of life of the urban people by improvement of slums, sanitation, garbage removal etc.²¹ Thus, urban development has essentially been a subject of city management, and to that extent isolated from real situations of change or stagnation outside the urban territories. In this context it may be reckoned that urban problems get intensified due to overflow of immigrants, resulting from

external factors, especially the poor state of agriculture and low incomes of the people in rural areas. Therefore, while efforts at containing growth of cities and improving the quality of life of urban people have their own merits in the ongoing situation, greater attention needs also to be paid for intensifying agricultural and rural development in backward regions and in the vicinity of smaller and industrially backward towns for a long term healthy trends of urbanisation and the overall development of the economy.

Comments

Certain comments referring to the negative relationship between population size and population growth rate across the 30 sample towns of U.P. are as follows:

1. Such an evidence was not clearly found in earlier studies referring to India. The possibility of a bias in the exercise due to the small sample size of 30 towns out of the total of 704 in 1981 should not be ignored.
2. The phenomena may be an statistical evidence obviating from low population base in small towns.
3. Relatively faster growth of population in smaller towns that are located in agriculturally developed areas may be in response to growth of industrial activity in such towns.
4. Relative deterioration in income levels and living conditions of the people in agriculturally backward regions may lead to migration in the nearby towns to a greater extent and most of such towns may be relatively small in size.

Table 1 : Population of India and Uttar Pradesh

Census Year	Total		Total UP as % of India	Rural		Rural UP as % of India	Urban		Urban UP as % of India
	India	U.P.		India	U.P.		India	U.P.	
1901	238396	48628	20.40	212544	43237	20.34	25852 (10.84)	5391 (11.09)	20.85
1911	252093	48155	19.10	226152	43248	19.12	25942 (10.29)	4907 (10.19)	18.92
1921	251321	46672	18.57	223235	41736	18.70	28086 (11.18)	4936 (9.42)	17.57
1931	278977	49780	17.84	245521	44211	18.01	33456 (11.99)	5569 (11.19)	16.65
1941	318661	55535	17.74	274507	49519	18.04	44153 (13.86)	7016 (12.41)	15.89
1951	361088	63220	17.51	298644	54594	16.28	62444 (17.29)	8626 (13.64)	13.81
1961	439235	73755	16.79	360298	64275	17.84	78937 (17.97)	9480 (12.84)	12.01
1971	548160	88341	16.12	439046	75952	17.30	109114 (19.91)	12389 (14.02)	11.35
1981	685185	110862	16.18	525457	90963	17.31	159727 (23.31)	19899 (17.95)	12.46

Note : Figures in parentheses are the percentages of urban to total population.

Source : Census of India 1981, Series 22, U.P., Part XA.

Table 2 : Decadal Variations in Population -
India and U.P.

Period	(Percentage)							
	I N D I A				U T T A R P R A D E S H			
	Total	Rural	Urban	Difference	Total	Rural	Urban	Difference
1901-11	5.75	6.40	0.38	-6.02	-0.97	0.03	-8.98	-9.01
1911-21	-0.31	-1.29	8.27	9.56	-3.08	-3.50	0.61	4.11
1921-31	11.00	9.98	9.12	-0.86	6.66	5.93	12.81	6.88
1931-41	14.22	11.81	31.97	20.16	13.57	12.01	26.00	13.99
1941-51	13.31	8.79	41.42	32.63	11.82	10.25	22.93	12.68
1951-61	21.51*	20.64	26.41	5.77	16.66	17.73	9.90	-7.83
1961-71	24.79	21.86	38.23	16.37	19.78	18.17	30.68	12.51
1971-81	25.00	19.68	46.39	26.71	25.49	19.76	60.62	40.86

Note : 'Difference' stands for the excess of urban percentage over the rural percentage.

* Population of district Tuensang of Nagaland (7025 in 1951 and 134275 in 1961) not taken into account as this area was censused first time in 1951.

Source : Census of India, 1981, Series 22, U.P., Part XA.

Table 3 : Town Size Distribution in Uttar Pradesh

		(percentages)				
Population Size Group (1000)	N/P	1901	1931	1961	1971	1981
I. 100 or more	N	1.53	1.85	5.99	6.59	4.26
	P	23.86	27.49	49.97	52.89	47.23
II. 50 - 99.999	N	2.40	2.55	6.34	6.29	5.40
	P	13.97	13.96	12.94	11.56	13.13
III. 20 - 49.999	N	4.37	6.71	19.72	21.26	13.92
	P	11.42	15.34	17.80	17.87	14.48
IV. 10 - 19.999	N	15.50	15.05	28.87	29.94	30.54
	P	18.48	15.83	11.91	11.56	14.84
V. 5 - 9.999	N	35.81	31.71	29.93	28.14	33.52
	P	20.95	16.81	6.79	5.67	8.80
VI. Upto 4.999	N	40.39	42.13	9.15	7.78	12.36
	P	11.32	10.57	0.59	0.45	1.52

N = Percentage of the number of towns in a size group, and

P = Percentage of urban population in towns of corresponding size group.

Source : Census of India 1971, Series 21, Uttar Pradesh, Part II-A, General Population Tables, Nov. 2, 1973; 1981, Series 22, Uttar Pradesh, Part XA, Town Directory, September 3, 1983.

Table 4 : Number of Towns and Population by Size Classes in Uttar Pradesh - 1961, 1971 and 1981

Population Size classes ('000)	No. of Towns			Population ('000)		
	1961	1971	1981	1961	1971	1981
I. 100 or more	17	22	30	4737 (279)	6552 (298)	9398 (313)
II. 50 - 99.999	18	21	38	1227 (68)	1443 (69)	2612 (69)
III. 20 - 49.999	56	71	98	1687 (30)	2214 (31)	2881 (29)
IV. 10 - 19.999	82	100	215	1130 (14)	1431 (14)	2954 (14)
V. 5 - 9.999	85	94	236	643 (8)	703 (7)	1751 (7)
VI. Upto 4.999	26	26	87	56 (2)	56 (2)	303 (3)
All Classes	284	334	704	9480 (33)	12389 (37)	19899 (28)

Note : Figures in parentheses show the average population ('000) per town.

Source : Census of India, Town Directory of U.P., 1971 and 1981.

Table 5 : Index of Urbanisation and Urban Population
Growth Rates in Major Indian States, 1951-81

States with population 5 million + in 1981	Urban Population%			Urban Population Growth%		
	1951	1961	1971	1951-61	1961-71	1971-81
1. Maharashtra	28.75	22.22	31.17	21.32	40.75	39.99
2. Tamil Nadu	24.35	26.69	30.26	22.59	38.64	27.97
3. Gujarat	27.28	25.77	28.08	20.07	41.00	41.42
4. West Bengal	23.88	24.45	24.75	35.97	28.41	31.72
5. Karnataka	22.95	17.80	24.31	18.26	35.23	50.54
6. Punjab	21.72	12.64	23.73	29.06	25.27	44.51
7. Andhra Pradesh	17.42	17.44	19.31	15.76	33.92	48.64
8. Jammu & Kashmir	14.05	16.66	18.59	29.77	44.65	46.86
9. Haryana	17.07	17.23	17.66	35.02	35.58	59.47
10. Rajasthan	18.50	16.28	17.63	11.04	38.47	58.69
11. Madhya Pradesh	12.02	14.29	16.29	47.70	46.67	56.03
12. Kerala	13.48	15.11	16.24	39.89	35.72	37.64
13. Uttar Pradesh	13.64	12.85	14.02	9.90	30.68	60.62
14. Bihar	6.77	8.43	10.00	49.03	43.95	54.76
15. Assam	4.28	6.50	8.87	126.15	66.80	54.27
16. Orissa	4.06	6.32	8.41	86.78	66.31	68.54
India	17.30	18.03	19.91	26.41	38.24	46.38

Source : Based on Census of India, 1971 and 1981.

Table 6 : Number of Districts by Index of Urbanisation 1971 and Urban Population Growth Rate 1971-81 in Uttar Pradesh

Index of Urbanisation 1971	(Number)				Total
	Urban Population Growth %, 1971-81				
	Below 50	50-75	75-100	100+	
20 +	8	1	2	-	11
10 - 20	2	5	5	-	12
5 - 10	3	6	5	5	19
Below 5	-	-	1	11	12
Total	13	12	13	16	54

(Correlation coefficient between Index of Urbanisation and urban population growth rate = -0.46, significant at 1% level).

**Table 7 : Urban Growth Related with Economic Base
Across Districts of Uttar Pradesh**

(correlation coefficient, r)

Economic Base	URBAN POPULATION			
	Percentage to total population 1971		Growth 1971-81 %	
	r	t value	r	t value
1. Stock, 1971-72				
a) Net Output, Registered Manufacturing	0.56	4.82**	x	x
b) Net Output, Unregistered Manufacturing	0.41	3.24**	x	x
c) Net Output, Total Manufacturing	0.53	4.54**	x	x
d) Net Output, Commodity Sectors	0.27	2.00**	x	x
2. Growth, 1971-72 to 1979-80 %				
a) Net Output, Registered Manufacturing	x	x	0.21	1.55
b) Net Output, Unregistered Manufacturing	x	x	0.19	0.43
c) Net Output, Total Manufacturing	x	x	0.33	2.49*
d) Net Output, Commodity Sectors	x	x	-0.17	1.23

No. of observations : 54; t values with *: Significant at 5% level
**: Significant at 1% level

Note : The estimates of net output for 1971-72 and 1979-80 used in this exercise are three-year averages, respectively over 1970-71, 1971-72 and 1972-73 and 1978-79, 1979-80 and 1980-81 at constant prices of 1970-71. The averaging was done in order to reduce annual fluctuations of net output values especially for the agriculture sector. The year-wise figures were taken from the bulletins of Districtwise Net Output, published by the Government of Uttar Pradesh, State Planning Institute, Lucknow.

Table 8 : Level of Agricultural Development and Urban Growth Across Districts of Uttar Pradesh

Urban Growth	No. of obser- vations	(correlation coefficient, r)			
		Gross Value of Agricultural Output 1976-77 (Rs.)			
		Per hectare of net area sown		'Per capita' rural population	
		r	t value	r	t value
1. Percentage growth of urban Population, 1971-81					
a) All districts	54	0.03	0.20	-0.16	1.20
b) Districts with IOU 10% or more	23	0.54	2.97**	0.60	3.49**
c) Districts with IOU below 10%	31	0.07	0.37	-0.04	0.19
2. Percentage point increase in the Index of Urbanisation (IOU)					
a) All districts	54	0.06	0.27	0.53	3.02**
b) Districts with IOU 10% or more	23	0.53	2.87**	0.54	2.96**
c) Districts with IOU below 10%	31	0.01	0.08	0.40	2.34*

* Significant at 5% level

** Significant at 1% level

Table 9 : Population Growth 1971-81 and Distribution of Work Force 1971 in Selected Towns of UP by Town Categories

Town Categories	No. of Towns	POPGR	TW	USW	NUSW	USW : NUSW
1. POP						
a) 0.1 m +	15	30.76	27.49	88.39	11.61	7.61
b) below 0.1 m	15	33.75	29.12	65.14	34.86	1.87
2. GVAO/NAS						
a) 2700 +	17	31.44	27.51	90.27	9.73	9.28
b) below 2700	13	28.70	27.90	72.27	27.73	2.61
3. GVAOPCR						
a) 600 +	16	34.96	27.64	89.81	10.19	8.81
b) below 600	14	26.89	27.53	84.05	15.95	5.27
4. USW						
a) 85 +	16	31.25	27.44	90.70	9.93	9.15
b) below 85	14	29.45	28.27	69.83	30.17	2.31
All Towns	30	30.94	27.59	86.94	13.06	6.66

POP : Population size, 1971

POPGR : Percentage growth of town population, 1971-81

TW : Percentage of working population, 1971

USW : Percentage of workers engaged in urbanising sectors 1971; urbanising sectors explained in section I.

NUSW : Percentage of workers engaged in non-urbanising (i.e., residual) sector, 1971.

Table 10 : Relative Dimensions of Growth Rates of
Population and Work-force in Various
Categories of the Selected Towns of UP
1971-81

Town Categories	TWGR	USGR	NUSGR	POPGR- TWGR	POPGR- USGR	POPGR- NUSGR	Share in	
							TWGR of USGR	NUSGR
<hr/>								
1. POP								
a) 0.1 m +	27.84	27.90	27.39	2.92	2.86	3.37	88.58	11.42
b) below 0.1 m	23.57	26.10	18.85	10.18	7.65	14.90	72.12	27.88
2. GVAO/NAS								
a) 2700 +	28.78	28.42	32.14	2.66	3.02	-0.70	89.14	10.86
b) below 2700	22.29	24.53	16.44	6.41	4.17	12.26	79.55	20.45
3. GVAOPCR								
a) 600 +	36.26	32.59	39.17	1.70	2.37	-4.21	87.99	12.01
b) below 600	21.85	22.69	17.46	5.04	4.20	9.43	87.25	12.75
4. USW								
a) 85 +	28.25	27.84	32.27	3.00	3.41	-1.02	89.37	10.63
b) below 85	24.51	27.71	17.11	4.94	1.74	12.34	79.94	21.06
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All Towns	27.58	27.82	25.96	3.36	3.12	4.98	87.70	12.30

Note : Source of the abbreviations used in this table are explained in Table 9. The others are : TWGR : Percentage growth of working population 1971-81; USGR : Percentage growth of workers in urbanising sectors 1971-81; NUSGR : Percentage growth of workers in non-urbanising (i.e., residual) sectors 1971-81.

Table 11 : Population Growth Rates Related with Population Size and Growth Rates of Total and Sectoral Workforce Related Among Each-other for Various Categories of Selected Towns in UP, 1971-81

Town Categories	No. of observations	(Correlation coefficients)						
		POPGR with			TWGR with		USGR with	
		POP	TWGR	USGR	NUSGR	USGR	NUSGR	NUSGR
1. POP								
a) 0.1 m +	15	-0.29	0.93**	0.91**	0.55*	0.99**	0.65**	0.55*
b) below 0.1 m	15	-0.45*	0.64**	0.40	-0.28	0.48	0.28	-0.42
2. GVAO/NAS								
a) 2700 +	17	-0.23	0.92**	0.89**	0.66**	0.97**	0.80**	0.71**
b) below 2700	13	-0.41	0.70**	0.51	-0.34	0.58*	0.15	-0.47
3. GVAOPGR								
a) 600 +	16	-0.14	0.98**	0.94**	0.81**	0.96**	0.79**	0.69**
b) below 600	14	-0.54*	0.31	0.33	-0.34	0.61*	0.36	-0.25
4. USW								
a) 85 +	16	-0.25	0.90**	0.91**	0.46	0.97**	0.68**	0.52*
b) below 85	14	-0.53	0.67**	0.33	-0.13	0.55*	0.19	-0.38
All Towns	30	-0.25	0.87**	0.80**	0.35	0.87**	0.57**	0.27

* Significant at 5% level; **Significant at 1% level.

Note : The abbreviations used in this table are explained in Table 9 and 10.

NOTES AND REFERENCES

1. Editorial, Urban India, Vol.5, No.2, July-December 1985, p.iii.
2. Kuznets, Simon (1973), "Modern Economic Growth : Findings and Reflections", American Economic Review, Vol.63, No.3, June, pp.247-258, Reproduced in Todaro M.P., ed. (1983), The Struggle for Economic Development : Readings in Problems and Policies, Longman, New York, pp.56-67, Kuznets identifies six characteristics of modern economic growth with Urbanisation as one of them, p.57. Urbanisation is also an essential characteristics of the Lewis - Fei - Ranis models of development which recognise the growth of modern industrial sector as pre-requisite for economic development through absorption of surplus agricultural labour. Lewis W.A. (1954), "Economic Development with Unlimited Supply of Labour", Manchester School of Economic and Social Studies, Vol.22, No.2; Lewis, W.A. (1958), "Unlimited Supply of Labour : Further Notes", Manchester School ... Vol.26, No.1; Fei JCH and Ranis G.C. (1961), "A Theory of Economic Development", American Economic Review, Vol.51.
3. Visaria, Pravin and Devendra Kothari (1984), "Data Base for the Study of Migration and Urbanisation in India : A Critical Analysis", paper presented at the Bi-National Indo-Soviet Seminar on Problems of Migration in the Process of urbanisation, Osmania University, Hyderabad, September 18-23, (mimeo.), p.12; the authors have considered four sources of urban growth : Natural Growth, Extension of Town Boundaries, reclassification of towns and rural-urban migration.
4. Hiremath, N.S. and C.G. Betsurmth (1984), "Rural Urban Migration : Theory and Applications", Indian Journal of Labour Economics, Vol.26, No.1 (Silver Jubilee Conference Number), January 1984, pp.286-87.
- 5,6. Todaro, M.P. (1969), "A Model of Labour Migration and Urban Unemployment in Less Developed Countries", American Economic Review, Vol.59, No.1, March; Harris J.R. and M.P. Todaro (1970), "Migration, Unemployment and Development : A Two Sector Analysis", American Economic Review, Vol.60, No.1; Mills Edwin S. and Charles M. Becker (1936), Studies in Indian Urban Development, Oxford University Press for the World Bank, New York, pp.17-18.

7. First, it is difficult to measure and allocate the aggregate demand for services among the household sector, industrial sector and the service sector itself. There are variety of services constituting the organised sector at one end and informal sector on the other, where it is difficult to locate which component of the service sector caters to which sector of the urban economy. Second, not all services, produced in a city, get established and grow on the basis of in-city demand. Mills Edwin S. and Charles M. Becker (1986) at No. quote that Bombay caters the whole country with its financial services and Delhi from the governmental services. Third, basic services in India is supplied not by private sector on commercial basis but by the Government on a subsidised basis. The availability of services at a point of time therefore hardly reflects the size of effective demand at a point of time.
8. The limit to city growth may proceed with slowing down of its growth rate due to discouraged immigration because of rising rent and commutation cost, and limits of exploitation of agglomeration economies (Verma at No.9, p.134) and physical barriers to expansion.
9. Verma, Satyendra, "Urbanisation and Productivity in Indian States" in Mills Edwin S. and Charles M. Becker (1986) at No.17, p.113.
10. Todaro, M.P. with Jerry Stilkind (1981), "The Urbanisation Dilemma" in Todaro M.P. ed. (1983), The Struggle for Economic Development - Readings in Problems and Policies, Longman, New York, p.196. The authors define 'overurbanisation' as 'a situation in which cities cannot adequately provide their rapidly growing population with basic services and reasonable job opportunities', which is 'not a comfortable concept among economists and planners'. Todaro's concept of 'overurbanisation' refers mainly to the large towns where population continues to grow at high rates.
11. It may be observed that rural urbanisation, being also influenced by economic situation in rural areas, is not closely related to conditions 'internal' to the towns (see Verma, at No.9, p.113). Small towns, on the other hand are likely to have relatively weak economic base not much of employment potential to offer to the migrants coming in due to push from rural areas.

12. The data sources are : Census of India 1971, Series 21, Uttar Pradesh, Part IIA, General Population Tables, November 2, 1973; Census of India 1971, Series 21, U.P. Part VIA, Town Directory, January 31, 1972; Census of India 1981, Series 22, Uttar Pradesh, Part XA, Town Directory, September 3, 1983; Government of Uttar Pradesh, State Planning Institute, District-wise Indicators of Development, 1981, Lucknow; Government of Uttar Pradesh, State Planning Institute, District Domestic Net Output (Commodity Producing Sectors), 1970-71 to 1976-77 and 1980-81.
13. Work-force data thrown by the Census for 1971 and 1981 (Main workers) are regarded as generally comparable for inferring trends, e.g. see Krishnamurty, J., (1984), "Changes in the Indian Work Force", Economic and Political weekly, Vol.19, No.50, December 15, pp.2121-2128. Further urban jobs are relatively more regular in nature where identification of workers is more straight forward and clear than in rural areas where there are multiplicity of occupations as well as underemployment.
14. In the hill regions the physical barriers to development of non-farm activities and hence urbanisation are too strong. The influences of economic forces in terms of urban growth in the hills is therefore negligible as compared to the situation in the plains. This dichotomy between hill and plains can be very easily observed.
15. Bose, A. (1973), India's Urbanisation 1901-2001, Tata McGraw-Hill Publishing Company Ltd., New Delhi (Second Edition).
16. Apart from the fact there has been some room for vagueness in defining towns, the criteria for identification of towns in 1961 Census was four-fold : (1) A density of population not below 1000 sq. miles, (2) Minimum population of 5000, (3) 75% of working population outside agriculture, and (4) Existence of a few pronounced urban characteristics to be observed by the Superintendent of the State. In earlier Census years the criteria was not rigorous. See Bose A. (1973), *ibid.*, p.41
17. Mills Edwin S. and Charles M. Becker (1936), Studies in Indian Urban Development, Oxford University Press for the world Bank, New York, 1922.

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18. Emmerij and Dharam Ghai, "Employment Problems in Developing Countries : Lessons from the World Employment Programme" in Cairncross, Sir Alec and Mohinder Puri eds. (1976), Employment Income Distribution and Development Strategy : Problems of Developing Countries (Essays in Honour of H.W. Singer), Macmillan, London, p.57.
19. If we compare the proportion of total work force to total population of the selected towns, the figure comes to 27.59 per cent for 1971 and 26.83 per cent by taking main workers for 1981. The reasons for the difference between the two is difficult to locate. It may however be noted that there is a little decline in the percentage of working population. It is deemed this decline would also get reflected while comparing the growth rate of population with growth rate of workers between 1971 and 1981. The gaps between the two growth rates, if marginal in nature have therefore been ignored in interpretation of data.
20. The negative relationship between city size and growth rate has also been found at all-India level. See Mills Edwin S. and Charles M. Becker (1986) at No.17, pp.48-49.
21. Government of India, Planning Commission, Seventh Five Year Plan, 1985-90, Vol.II, New Delhi, pp.297-98.
22. Simmons, Alan B., "A Review and Evaluation of Attempts to Constrain Migration to Selected Urban Centres and Regions" in Todaro, M.P. ed. (1983), The Struggle for Economic Development : Readings in Problems and Policies, Longman, New York & London, p.224.